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EXAMINER

KOZIOL, STEPHEN R

ART UNIT	PAPER NUMBER
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2624

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/754,322

Applicant(s)

HATTI ET AL.

Examiner

STEPHEN R. KOZIOL

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period **will** apply and **will** expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply **will**, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08/28/2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 3-5, and 7-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3-5, and 7-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01/09/2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

Detailed Action

1. Amendments and Remarks filed August 28, 2008 have been entered and considered, but are not fully persuasive. Claims 1, 4, and 9 have been amended, and claim 15 has been newly added. Claims 1, 3-5, and 7-15 remain. Applicants' amendments necessitated the new grounds of rejection set forth herein; accordingly, this action is made final.

Response to Arguments

2. *Response to Applicants' Remarks:*

The new grounds of rejection set forth herein, necessitated by Applicants' amendments, obviate Applicants' Remarks filed 08/28/2008 at least because Greene et al. (USPN 5,670,993) teaches the newly added limitations argued in Applicants' Remarks.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Newly added Claim 15 is rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. Claim 15 contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 15 adds the limitation "wherein the first number and the second number indicate a number of luma lines." However, Applicants' originally filed specification is silent on the use of

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luma lines as required by claim 15. Hence, Claim 15 is rejected under 35 U.S.C. § 112, first paragraph for containing new matter.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in ***Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966)**, that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows: (*See MPEP Ch. 2141*)

- a. Determining the scope and contents of the prior art;
- b. Ascertaining the differences between the prior art and the claims in issue;
- c. Resolving the level of ordinary skill in the pertinent art; and
- d. Evaluating evidence of secondary considerations for indicating obviousness or nonobviousness.

Claims 1, 3-5, and 7-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Baker et al., U.S. Patent No. 5,777,601 (“Baker”) in view of Greene et al. U.S. Patent No. 5,670,993 (“Greene”).

As to claim 1, Baker discloses a method for displaying a picture (Abstract, fig 1A), said method comprising:

- i. providing a first parameter (fig. 3, also, col. 13, ln. 64-67 cont’ col. 14, ln. 1-18 “modulated chrominance components”) to a first register (fig. 3 item 136, also, col. 13, ln. 64-67 cont’ col. 14, ln. 1-18 “video output memory”) indicating that the picture comprises a first number of lines (col. 13, ln. 64-67 cont’ col. 14, ln. 1-18, where Baker’s “modulated chrominance components” contribute to the run-length encoded (RLE) image stream, indicating a first number of image lines); and

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- ii. providing a second parameter (fig. 3, also, col. 13, ln. 64-67 cont' col. 14, ln. 1-18 “luminance components”) to a second register (fig. 3 item 128, also, col. 13, ln. 64-67 cont' col. 14, ln. 1-18 “display memory”), indicating that the picture comprises a second number of lines (col. 13, ln. 64-67 cont' col. 14, ln. 1-18, where Baker’s “luminance components” contribute to the run-length encoded (RLE) image stream, indicating a second number of image lines).
- iii. receiving a horizontal synchronization pulse (fig 7, items 706-716, also, col. 19 ln. 65-67 cont' col. 20, ln. 1-5, as well as col. 14 lines 4-18);
- iv. providing the particular one of the first number of lines for scaling (fig. 3, item 306, also, col. 12, ln. 14-38) or composing (fig 3, item 316, further, col. 12, ln. 64-67 cont' col. 13, ln. 1-21 “the media stream controller, fig. 1 item 114, then generates digital composite pixel data”) or capturing (fig 3, item 320, further, col. 12, ln. 64-67 cont' col. 13, ln. 1-21) for the horizontal synchronization pulses that are associated with line numbers that exceed the first number of lines (see also col. 18 lines 32-52); and
- v. "repeatedly providing a last of the first number of lines for scaling or composing or capturing for each of the horizontal synchronization pulses that are associated with line numbers that exceed the first number of lines" (see col. 9 lines 21-42 as described above).

Baker is presently interpreted as being silent on the newly added limitations of “wherein the first parameter is determined by setting the first parameter to a line number associated with a desired line for repeating; wherein the second parameter is determined by setting the second parameter to a number of lines to be displayed; and, wherein the last of the first number of lines is provided from the same memory address during each repetition” as required by the newly amended

independent claims. However, Greene is interpreted to teach each of the above-noted newly added limitations to the independent claims as follows.

Greene teaches a similar display refresh system. One objective of Greene's system involves reducing the memory bandwidth required to provide one or more images to a display screen. One way in which Greene achieves the memory bandwidth reduction comprises using "redundancy rows" (Fig. 2 item 48), each redundancy row corresponding to one or more actual rows on the display screen (Fig. 2 item 26). Greene's redundancy rows repeat a last display line (stored in a line buffer) to the display screen (Fig. 2 item 26) for a predetermined number of rows. Hence, Greene is able to realize savings in the amount of memory bandwidth required to display one or more images by repeating a last line in a display buffer until the image is accurately displayed.

Accordingly, Greene is interpreted to teach the newly added limitations wherein the first parameter is determined by setting the first parameter to a line number associated with a desired line for repeating (see Greene Fig. 2 column 5 lines 13-40); wherein the second parameter is determined by setting the second parameter to a number of lines to be displayed (see Greene Fig. 1 column 5 lines 13-40); and, wherein the last of the first number of lines is provided from the same memory address during each repetition (see Greene column 5 line 62 through column 6 line 9).

The ordinarily skilled artisan, starting with the image display system of Baker, would have looked to the enhanced image display system of Greene to incorporate the well-known and expected benefits of repeating redundant lines as taught by Greene. A person having ordinary skill and creativity in the image processing arts at the time of the instant application would have

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found it obvious to incorporate the well-known and expected uses and benefits of Greene's redundant row display system (as identified supra) with the basic display system of Baker to achieve the benefit of reducing the amount of memory required to display an image.

Claim 2 has been cancelled.

As to claim 3, Baker discloses method for displaying a picture further comprising:

- i. if the horizontal synchronization pulse is associated with a particular one of the first number of lines (col. 26, ln. 30-47 where the RLE data containing an image parameter indicating a first number of lines as established re claim 1 above, is fetched from the FIFO to the RLE decoder for display), fetching the particular one of the first number of lines for scaling or composing or capturing (see claim 1 for scaling, composing, and capturing discussion); and
- ii. if the horizontal synchronization pulse is not associated with a particular one of the first number of lines (col. 26, ln. 30-47 where the last line of RLE data containing an image parameter indicating a first number of lines as established re claim 1 above, is repeatedly fetched by the data register fig. 9 item 934), fetching a last of the first number of lines for scaling or composing or capturing (see claim 1 for scaling, composing, and capturing discussion).

As to claim 4, Baker discloses a decoder system for displaying a picture (Abstract, fig. 1A), said decoder comprising:

- i. a feeder for fetching lines of the picture (fig. 3 item 314, also, col. 12, ln. 48-56);
- ii. a scalar for scaling lines of the picture (fig. 3, item 306, also, col. 12, ln. 14-38);

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- iii. a compositor composing multiple video/graphics layers (fig 3, item 316, further, col. 12, ln. 64-67 cont' col. 13, ln. 1-21 "the media stream controller, fig. 1 item 114, then generates digital composite pixel data");
- iv. a video capture capturing the picture into DRAM capturing (fig 3, item 320, further, col.8, ln. 15-27) and
- v. a controller for providing a first parameter to the feeder indicating that the picture comprises a first number of lines (fig. 1A item 114 is the "media stream controller" that is interpreted to act as the controller for providing an image for display. Additional control logic is described in col. 25 lines 54-67) and providing a second parameter to the scalar or compositor or capture indicating that the picture comprises a second number of lines (fig. 3 item 128, also col. 13, ln. 64-67 cont' col. 14, ln. 1-18).

Baker is presently interpreted as being silent on the newly added limitations of "wherein the first parameter is determined by setting the first parameter to a line number associated with a desired line for repeating; wherein the second parameter is determined by setting the second parameter to a number of lines to be displayed; and, wherein the last of the first number of lines is provided from the same memory address during each repetition" as required by the newly amended independent claims. However, Greene is interpreted to teach each of the above-noted newly added limitations to the independent claims as indicated re claim 1 supra.

As to claim 5, Baker discloses a decoder system for displaying a picture wherein the feeder comprises a register (fig. 3 item 314-316, also, col. 12, ln. 48-56) for storing the first parameter and wherein the scalar or compositor or capture comprises a register for storing the

second parameter (see claim 2 ii for scaling, composing, and capturing discussion, including registers for storing the second parameter).

Claim 6 has been cancelled.

As to claim 7, Baker teaches the decoder system of claim 4 wherein the scalar or compositor or capture receives horizontal synchronization pulses and wherein the feeder provides the particular one of the first number of lines for scaling or composing or capturing for the horizontal synchronization pulses that are associated with particular ones of the first number of lines and repeatedly provides a last of the first number of lines for scaling or composing or capturing for each of the horizontal synchronization pulses that are associated with line numbers that exceed the first number of lines (see col. 9 lines 21-42 as described re claim 1 above).

Claim 8 has been analyzed and is rejected with respect to claim 3 above because the limitations in claim 8 overlap those of claim 3.

As to claim 9, Baker discloses a circuit for displaying a picture, said circuit comprising:

- i. a feeder (fig. 3 item 314, also, col. 12, ln. 48-56);
- ii. a scalar connected to the feeder (fig. 3, item 306, also, col. 12, ln. 14-38);
- iii. a compositor connected to the feeder (fig 3, item 316, further, col. 12, ln. 64-67 cont' col. 13, ln. 1-21 "the media stream controller, fig. 1 item 114, then generates digital composite pixel data");
- iv. a video capture connected to the feeder (fig 3, item 320, further, col.8, ln. 15-27); and
- v. a controller (fig 1A item 114, where the network of buses indicated in Fig. 1A effectively connect the "media stream controller" to the various components of the display circuit) connected to the feeder, the scalar, the compositor, the capture and the controller operable

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to program a feeder with a first parameter indicating that the picture comprises a first number of lines and program a scalar or compositor or capture with a second parameter indicating that the picture comprises a second number of lines (col. 13, ln. 64-67 cont' col. 14, ln. 1-18).

Baker is presently interpreted as being silent on the newly added limitations of “wherein the first parameter is determined by setting the first parameter to a line number associated with a desired line for repeating; wherein the second parameter is determined by setting the second parameter to a number of lines to be displayed; and, wherein the last of the first number of lines is provided from the same memory address during each repetition” as required by the newly amended independent claims. However, Greene is interpreted to teach each of the above-noted newly added limitations to the independent claims as indicated re claim 1 supra.

As to claim 10, Baker discloses a circuit for displaying a picture further comprising: memory connected to the controller (fig 3, item 320, further, col.8, ln. 15-27), said memory storing a plurality of instructions, wherein execution of the plurality of instructions by the controller causes: programming the feeder with the first parameter indicating that the picture comprises a first number of lines; and programming the scalar or compositor or capture with the second parameter indicating that the picture comprises a second number of lines (fig, 3, also, col. 13, ln. 64-67 cont' col. 14, ln. 1-18, further, col. 26, ln. 30-47).

Claim 11 has been analyzed and is rejected for the reasons indicated re claim 5 above.

Claim 12 has been analyzed and is rejected for the reasons indicated re claim 1 item iii above.

Claim 13 has been analyzed and is rejected for the reasons indicated re claim 1 above.

Claim 14 has been analyzed and is rejected for the reasons indicated re claim 1 above.

As to claim 15, Baker teaches indicating a first and second number of luminance lines in at least Fig. 4 items 410 and 412 as described in column 16 lines 58-64.

Claim Objections

6. Claim 3 is objected to for depending on cancelled claim 2. For the purposes of the present Office action, claim 3 is treated as depending from claim 1. Appropriate correction is required.

Conclusion

7. Applicants' amendments necessitated the new grounds of rejection set forth herein. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no, however, event will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action

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Contact

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steve Koziol whose telephone number is (571) 270-1844. The examiner can normally be reached on Monday - Friday 9:00 - 5:30 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Samir Ahmed can be reached at (571) 272-7413 . Customer Service can be reached at (571) 272-2600. The fax number for the organization where this application or proceeding is assigned is (571) 273-7332.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/srk/
12/05/2008

/Samir A. Ahmed/

Supervisory Patent Examiner, Art Unit 2624